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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,964	10/11/2001	Edwin James Harris IV	112690-098	2962

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EXAMINER	
VIJAYAKUMAR, KALLAMBELLA M	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/976,964	HARRIS, EDWIN JAMES	
	Examiner	Art Unit	
	Kallambella Vijayakumar	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) *10-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 33-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-41 are currently pending with the application. Claim-1 was amended and new claims 33-41 were added. Claims 10-32 are withdrawn from consideration.

Applicant's arguments filed 07/06/2005 with respect to claims 1-9 and 33-41 have been fully considered but they are not persuasive for the following reasons:

Applicants argue that the prior art by Martinez et al (US-374) just teaches a molded coherent shape and does not teach it is free standing, sufficiently rigid to support and be packaged and the conductive particles protect the component from ESD event (Pg-8, Para-5) and further does not teach the printable VVM substrate (Pg-9, Para-6) is not persuasive because Martinez et al discloses VVM sheets with a thickness of from 15 or 20 mils to about 110 mils (Col-18, Ln 56-59) that is the range of the thickness of a PCB, and the free standing/self-supporting nature of the VVM sheet would be inherent. Further, Martinez et al teach the use of the VVM sheet to provide protective components for incorporation in to sensitive electronic/electrical equipment and assemblies such as IC chips or PCB or into power supply components (Col-27, 37-54). Applicants further argue that the prior art by Schrier et al further teaches the spreading of the material and it is not a free standing material is not persuasive because prior art teaches tapes and films of VVR material with resistance to compression that could be custom cut as strips whereby the free standing/self-supporting nature of the VVM sheet would be inherent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent. .

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 7-9, 33-36 and 39-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Martinez et al (US 5,294,374) in view of Nichols (US 4,518,646).

Normally, only one reference should be used in making a rejection under 35 U.S.C. 102. However, a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to (MPEP 2131.01):
(A) Prove the primary reference contains an "enabled disclosure;"
(B) Explain the meaning of a term used in the primary reference; or
(C) Show that a characteristic not disclosed in the reference is inherent.

The use of phrases "to support and be packaged with at least one electrical component" in the claim-1 and "to accept and support multiple ----one of the traces"" in the claim-33 have not been treated with patentability. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963).

Martinez et al disclose a self-supporting electrical overstress material (EOM) sheets comprising conductive and semiconductive fillers dispersed in a curable insulative binder such as silicone (Abstract, Col-3, Ln 60-63; Col 18, Ln 56-59, Col-20, Example-1) meets the limitation of claims 1 and 33. The prior art further teaches EOM sheets with unique mechanical strength (Col-30, Ln 25-29) and with a thickness of from about 15 mils to about 110 mils (Col-18, Ln 56-59) that is of the order of the thickness of a PCB whereby the rigidity of the EOM sheet will be inherent (See Nichol's, US 4,518,646; Col-10, Ln 60-63). The prior art further teaches that the EOM materials/sheets find use in electric/electronic components including PCB's (Col-27, Ln 37-54) and printing of the sheets be anticipated. The conductive operable to protect the component from ESD in claims 1 and 33 will be inherent, because prior art composition is identical to that by the applicants and identical compositions have identical properties. With regard to the product by process limitation in claim-1, claim is drawn to the product it-self.

With regard to the conductive particles in claims 2-3 and 34-35, the prior art discloses compositions containing Ni and Al particles (Col-14, Table-1).

With regard to the binder in claims 4 and 36, the prior art discloses the polyimide film in the compositions (Col-6, Ln 52-54).

With regard to the claims 7-9 and 39-41, the prior art teaches electrical overstress materials comprising silicone rubber, nickel powder, semiconductor powder and silica (Col-16, 49-52; Col-20-21, Example-1, Col-10, Ln 60-66, Col-12, Ln 52). With regard to product by process limitation in the claims, when the reference teaches a product that appears to be the same as the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See In re Marosi, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

The reference is anticipatory.

2. Claims 1-6, 9, 33-38 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Schrier et al (WO 96/02922).

Schrier et al disclose a variable voltage protection (VVP) material comprising a reinforcing layer of insulating material having a substantially constant thickness impregnated with a voltage material (VM) (Pg-4, Ln 16-18; Pg-8, Ln 28-31, Pg-9, Ln 20-22). The VVP was fabricated in the form of a webbing, tape, label or a film with a typical thickness of 2-3 mil (0.06-0.08 mm) that could be custom cut meets the limitation of a variable voltage substrate in claim-1 (Pg-14, Ln 27-30). The reinforcing material was impregnated with VM material paste containing a solvent, aluminum powder, silica and fluorosilicone binder meets the limitations of claims 1-3, 9, 33-36 and 41 (Pg-12, Ln 10-18). The conductive particles operable to protect the component from ESD in claims 1 and 33 and printability in claims 33-41will be inherent, because prior art composition is identical to that by the applicants and identical compositions have identical properties and identical utilities. The rigidity will be inherent because of the dimensional stability of the film/tape due to the resistance to compressibility. With regard to the product by process limitation in claims 1, 7-9, and 39-41, the claims are drawn to the product it-self.

With regard to the curable binder in claims 4-6 and 36-38, the prior art teaches VVP containing various binders including a low compressibility fabric, a resin polymer tape, a mat, non-woven mat of

woven-fibers, glass fibers and epoxy (Pg-8, Ln-1, 8-14, 18-20, Fig 1-2). All the limitations of the instant claims are met.

The reference is anticipatory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 5-6 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Martinez et al (US 5,294,374) in view of Nichols (US 4,518,646) further in view of Schrier et al (WO 96/02922).

The disclosure by Matinez et al on the composition of the EOS sheets as set forth in rejection-1 under 35 USC 102(b) is herein incorporated.

The prior art fails to teach the EOS sheet composition containing a reinforcing material/curable-binders per claims 5-6 and 37-38.

In the analogous art, Schrier et al teach the composition of variable voltage protection (VVP) films and ribbons containing a reinforcing layer to resist compressive forces whereby increased flex strength

and dimensional stability would be obvious (Abstract). The prior art further teaches various binders including a low compressibility fabric, a resin polymer tape, a mat, non-woven mat of woven-fibers, glass fibers and epoxy (Pg-8, Ln-1, 8-14, 18-20, Fig 1-2).

It would have been obvious to a person of ordinary skill in the art to combine the prior art teachings to optionally include the reinforcing layer in the EOS sheets of Martinez et al to benefit from resistance to compressive forces and/or epoxy as functional equivalent for the resin with reasonable expectation of success because the prior art is suggestive of such combination.

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2. Claims 7-8 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrier et al (WO 96/02922) in view of Martinez et al (US 5,294,374).

The disclosure by Schrier et al on the variable voltage protection (VVP) material as set forth in Rejection-2 under 35 USC 102(b) is herein incorporated.

Schrier et al do not disclose the use of semiconducting particles in the VVP composition per the claims 7-8. However the prior art is suggestive that any voltage variable material known in the art including those taught by Hyatt et al could be used.

In the analogous art, Martinez et alt teaches the composition of EOS materials comprising semiconductor particles such as semiconducting carbides and their benefits in providing wide range EOS protection for the equipment (Col 11, Ln 56-67; Col-12, Ln 57-61).

It would have been obvious to a person of ordinary skill in the art to combine the teachings of Schrier et al and Martinez et al and optionally include semiconductor materials in the composition to benefit from a wide range electrical overstress protection material, with reasonable expectation of success because the combined prior art is suggestive of such combination.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 8-5.30 Mon-Thu, 8-4.30 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Kopec
Primary Examiner

KMV
September 16, 2005.